

AMENDMENTS TO THE CLAIMS:

Please amend the claims to read as follows:

1. - 31. (canceled)

32. (currently amended) A dental material or dental product comprising a ceramic made of metal oxide powder with a bimodal particle size distribution made from a bimodal metal oxide powder comprising

(a) a first metal oxide powder with a d_{50} value of 0.2 μm to 12 μm and

(b) a second, nanoscale metal oxide powder with a d_{50} value of 10 nm to 300 nm,

wherein the size ratio of the d_{50} values of (a) to (b) lies at a maximum of 40 to 1 and the quantity ratio of (a) to (b) is from 0.1 : 99.9 to 99.9 : 0.1,

wherein the ceramic has a crystalline matrix.

33. (previously presented) The dental product of claim 32, wherein the size ratio of the d_{50} value of (a) to (b) lies between 12.4 and 40 to 1.

34. (currently amended) A method comprising the ~~step of forming a dental product from a ceramic made of~~ steps of compacting a metal oxide powder with a bimodal particle size distribution made from a bimodal metal oxide powder comprising

(a) a first metal oxide powder with a d_{50} value of 0.2 μm to 12 μm and

(b) a second nanoscale metal oxide powder with a d_{50} value of 10 nm to 300 nm,

wherein the size ratio of the d_{50} value of (a) to (b) lies at a maximum of 40 to 1 and the quantity ratio of (a) to (b) is from 0.1 : 99.9 to 99.9 : 0.1,

to agglomerate the metal oxide powders and form a ceramic having a crystalline matrix, and forming a dental product from the ceramic.

35. (previously presented) The method of claim 34, wherein the size ratio of the d_{50} value of (a) to (b) lies between 12.4 and 40 to 1.

36. (new) The method of claim 34, wherein the metal oxides are selected from the group consisting of ZrO_2 , HfO_2 , TiO_2 , and Al_2O_3 .

37. (new) The method of claim 36, wherein a metal oxide includes one or more dopants selected from the group consisting of CeO_2 , CaO , MgO , Sc_2O_3 , and Y_2O_3 .

38. (new) The method of claim 34, wherein the bimodal metal oxide powder, undergoes cold isostatic (uniaxial) final compacting or it is first pre-compacted and then undergoes final compacting, and is subjected to a pre-sintering at a sintering temperature ranging from 300°C to 1100°C for a sintering duration of 0.5 to 8 hours.
39. (new) The method of claim 38, wherein the compacted bimodal metal oxide powder or the pre-sinter ceramic undergoes a milling process and then the milling ceramic is subjected to sintering.
40. (new) The method of claim 34, wherein the first metal oxide powder (a) and the second, nanoscale metal oxide powder (b) are mixed together and the mixture is subjected to granulation to produce the bimodal metal oxide powder.
41. (new) The method of claim 34, wherein the first metal oxide powder (a) is subjected to granulation and the granules thus produced are mixed with the second, nanoscale metal oxide powder (b) to produce the bimodal metal oxide powder.
42. (new) The dental product of claim 32, wherein the metal oxides are selected from the group consisting of ZrO_2 , HfO_2 , TiO_2 , and Al_2O_3 .
43. (new) The dental product of claim 42, wherein a metal oxide includes one or more dopants selected from the group consisting of CeO_2 , CaO , MgO , Sc_2O_3 , and Y_2O_3 .
44. (new) A dental material or dental product comprising a ceramic made of metal oxide powder with a bimodal particle size distribution made from a bimodal metal oxide powder comprising
- (a) a first metal oxide powder with a d_{50} value of 0.2 μm to 12 μm and
 - (b) a second, nanoscale metal oxide powder with a d_{50} value of 10 nm to 300 nm,
- wherein the size ratio of the d_{50} values of (a) to (b) lies at a maximum of 40 to 1 and the quantity ratio of (a) to (b) is from 0.1 : 99.9 to 99.9 : 0.1, wherein the metal oxides are compacted.
45. (new) The dental product of claim 44, wherein the metal oxides are selected from the group consisting of ZrO_2 , HfO_2 , TiO_2 , and Al_2O_3 .
46. (new) The dental product of claim 45, wherein a metal oxide includes one or more dopants selected from the group consisting of CeO_2 , CaO , MgO , Sc_2O_3 , and Y_2O_3 .

47. (new) A bimodal metal oxide powder or bimodal metal oxide-binder composite, comprising

- (a) a first metal oxide powder (with or without surface modification); and
- (b) a second, nanoscale metal oxide powder (with or without surface modification),

characterized in that

the first metal oxide powder (a) has a d_{50} value of 0.2 μm to 12 μm ; and

the second, nanoscale metal oxide powder (b) has a d_{50} value ranging from 10 nm to 300 nm;

whereby the size ratio of the d_{50} values of (a) to (b) lies at a maximum of 40 to 1 and the quantity ratio is from 0.1: 99.9 to 99.9: 0.1,

whereby bimodal metal oxide powders made of $\gamma\text{-Al}_2\text{O}_3$, consisting of a first $\gamma\text{-Al}_2\text{O}_3$ powder having an average particle size of 1 μm and of a second $\gamma\text{-Al}_2\text{O}_3$ powder having an average particle size of 70 nm to 120 nm, are excluded,

and whereby the metal oxides are selected from the group consisting of HfO_2 , TiO_2 , Al_2O_3 , ZrO_2 , and ZrO_2 doped with one or more dopants selected from the group consisting of CeO_2 , CaO , MgO , Sc_2O_3 and Y_2O_3 .

48. (new) The bimodal metal oxide powder according to claim 47, characterized in that the metal oxide is ZrO_2 .

49. (new) The bimodal metal oxide powder according to claim 47, characterized in that the second, nanoscale metal oxide powder (b) is ZrO_2 and is stabilized with 0.5 mole % to 12 mole %, relative to the total amount of a second, nanoscale metal oxide, of another metal oxide.

50. (new) The bimodal metal oxide powder according to claim 49, characterized in that the other metal oxide is 1 mole % to 5 mole % of Y_2O_3 .

51. (new) The bimodal metal oxide powder according to claim 50, characterized in that the other metal oxide is approximately 3 mole % of Y_2O_3 .

52. (new) The bimodal metal oxide powder according to claim 47, characterized in that the second, nanoscale metal oxide powder (b) is made by means of a plasma synthesis method.

53. (new) The bimodal metal oxide powder according to claim 47, characterized in that the second, nanoscale metal oxide powder (b) has an average particle size in a range of 10 nm to 200 nm.

54. (new) The bimodal metal oxide powder according to claim 53, characterized in that the second, nanoscale metal oxide powder (b) has an average particle size in a range of 15 nm to 100 nm.

55. (new) The bimodal metal oxide powder according to claim 54, characterized in that the second, nanoscale metal oxide powder (b) has an average particle size in a range of 40 nm to 50 nm.

56. (new) The bimodal metal oxide powder according to claim 47, characterized in that the bimodal metal oxide powder comprises 5% to 30% by weight, of the second, nanoscale metal oxide powder (b), relative to the total weight of the bimodal metal oxide powder.